

CARB AB 32 Scoping Plan Development Workshop

Oil & Gas Sector (Morning Session)

April 11, 2008

WSPA/CIPA/IOPA Presentation



**Western States Petroleum
Association (WSPA)**

**California Independent
Petroleum Association (CIPA)**

**Independent Oil Producers
Agency (IOPA)**

CARB Oil & Gas Sector “Early Actions”

Oil & Gas Sector Early Actions: Addressing Oil & Gas Production and Refining Operations, CARB, October 22, 2007

- **VENTING FROM OIL AND GAS SYSTEMS:** Reducing leaking and venting in the production, transport, and distribution of crude oil and natural gas (Target Emission - METHANE*).
- **METHANE CONTROLS IN OIL FIELDS:** Reducing leaking from oil and gas extraction operations such as petroleum gas seeps, process losses, and storage tanks (Target Emission - METHANE)

* Methane in the atmosphere is eventually oxidized, producing carbon dioxide and water.

CARB “Early Actions” Ideas

VENTING FROM OIL AND GAS SYSTEMS

- Replace Pneumatic Devices
- Install Flash Tank on Glycol Dehydrators
- Retrofit Natural Gas Compressors
- Use Infrared Aerial Imaging to Detect Leaks

METHANE CONTROLS IN OIL FIELDS

- “Small and insignificant CH₄ emission sources associated with the entire chain of exploration , production, and processing of oil and natural “ (CARB staff conclusion in Early Action Report)

What the Oil & Gas Industry is Doing Today

“Enhanced” Fugitive (VOC) Emission I&M Requirements

- SBCAPCD Rule 331 (adopted 1979, last amended 1991)
- VCAPCD Rule 74.7 (adopted 1979, last amended 1995)
- SCAQMD Rule 1173 (adopted 1989, last amended 2007)
- SJVAPCD Rule 4409 (adopted 2005)

SCAQMD is Nonattainment for Ozone (VOC is a precursor)

SJVAPCD is Nonattainment for Ozone (VOC is a precursor)

VCAPCD is Nonattainment for Ozone (VOC is a precursor)

SBCAPCD is now Attainment for Ozone

What the Oil & Gas Industry is Doing Today

General Rule Elements

- Scheduled field inspections with certified leak detection equipment
- Established leak detection thresholds
- Established leak repair time limits
- Use sophisticated emission estimating techniques
- Requires Best Available Control Technology (BACT)
- Subject to air agency compliance inspections

BACT for Valves, Flanges, and Components (controls all emissions)

- Bellow valves
- Welded seals
- Pump seals fitted with fluid barrier
- Closed systems (vapor recovery system)

What the Oil & Gas Industry is Doing Today

Glycol Dehydrators Requirements

- SBCAPCD Rule 325
- VCAPCD Rule 71.5
- SCAQMD Rule 1173
- SJVAPCD Rule 4408

Emission Control Requirements

- Vapors collected by vapor recovery systems
- Condensation of still gases
- Vapors combusted by flare, incinerator, reboiler, or thermal oxidizer
- Other controls achieve at least 95% reduction

What the Oil & Gas Industry is Doing Today

Leak Monitoring Technology

- Toxic Vapor Analyzer (TVA) - onsite, quantitative
- Infrared Imaging (IR) - remote, qualitative
- Aerial Imaging - DOT applications

Going Forward

“Things Being Done at California facilities”

- NSR, NSPS, BACT, MACT
- Vapor recovery systems
- Enhanced I&M programs
- Energy efficiency programs
- Natural Gas STAR Program
- California Climate Action Registry

“Things to Consider”

- Continue to work together.
- Recognize relationships between GHG & other regulated pollutants.
- Consider cost-effectiveness and technical feasibility.